

POLICY RESEARCH WORKING PAPER

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Female-Headed Households, Poverty, and the Welfare of Children in Urban Brazil

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Female-headed households — a growing segment of Brazilian households — are a heterogeneous group that defies stereotyping. While most are not poor, a large number of the poor, especially children, live in these households. The most effective antipoverty intervention is to focus on raising the income of the working women in these households. Special effort is also needed to encourage children in these households to stay in school.

The World Bank
Policy Research Department
Office of the Director
March 1994



Summary findings

Barros, Fox, and Mendonca analyze the characteristics and behavior of households headed by women in urban Brazil and identify some of the consequences for child welfare on the growth of these households. Among their findings:

- Households headed by women are a heterogeneous group, which varies strongly by region — as does the extent of poverty among them. Such households are more common in the northeast and increase with urbanization.
 - Households headed by women are not, on average, a “vulnerable group” in Brazil, as some are quite well off. The subset of such households that are very poor is quite vulnerable. Households headed by women tend to be poorer in the northeast, especially around Recife, than in Porto Alegre in the south, where there is virtually no gap.
 - Less than half the households headed by women contain dependent children, and only a third are headed by the stereotypical “single mother.” When there are children in households headed by women, especially households headed by single mothers, the income gap is greater than in other households.
- As a proportion of households in Brazil, households headed by women and containing children represent only 3.4 percent of urban households, but this group tends to be poor, which is worrisome for child outcomes.

Poor children tend to live in households headed by women.

These households are poor not because there are more children or fewer adults but because women earn less than men. Women heading households do not earn less than other women — on the contrary. However, if female heads of households earned as much as male heads of households, the average income in households headed by women would be above that for other households and fewer single mothers would be poor.

The best interventions to eliminate poverty in this group are those that focus on:

- Ending wage discrimination.
- Ending occupational segregation.

Interventions that focus on raising skill levels and educational attainment for the whole workforce, including women, would also help alleviate absolute poverty, although not necessarily relative income differences. “Workfare” or public employment policies would not help this group since most already participate in the labor force.

Programs targeted to this group would not be particularly progressive, given the heterogeneity and income spread among these households. But the results do suggest the need for special interventions for children in households headed by women, given those children’s tendency to stay out of school.

This paper — a product of the Office of the Director, Policy Research Department — is part of a larger effort in the department to analyze behavioral characteristics of vulnerable groups. Copies of the paper are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Kay Binkley, room E-1243, extension 81143 (46 pages). March 1994.

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**FEMALE-HEADED HOUSEHOLDS,
POVERTY, AND THE WELFARE OF CHILDREN
IN URBAN BRAZIL**

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This study was supported by World Bank Research Funds.

INTRODUCTION

Households headed by women have become an important phenomenon worldwide in the last half of the twentieth century (ICRW, 1988). Brazil is no exception, having experienced a steady increase in female-headed households as a share of total households over the last three decades, especially in large urban areas. In 1987, one-fifth of all households in metropolitan areas in Brazil were headed by women. As in other countries, female-headed households in Brazil are more likely to be in poverty at any point in time than are male-headed households.¹ Little is known about the long term consequences of this trend or the implications for anti-poverty programs in Brazil. If the research of Wood, (1989) is any indicator, the consequences are worrisome. Using data from the 1960 and 1990 censuses, he found that as a result of higher poverty rates and higher levels of other risk factors associated with reduced survival probabilities, children born into female-headed households are more likely to die in childhood. While debate continues over the definition of the female-headed household, the causes of the observed increase worldwide, and the normative implications of this increase for women and society, the fact remains that addressing the question of poverty alleviation in this generation and the next requires understanding the economic behavior of female-headed households.

In both developed and developing countries, studies have shown that female-headed households tend to have different demographic, sociological and microeconomic characteristics from male-headed households, and that these differences have major implications for the design of policy and programmatic interventions (ICRW, 1988; Kossoudji and Mueller, 1983). For example, while children in poverty are always at risk, one of the major findings of studies in the United States is that, even controlling for income, children in female-headed households seem to have a lower rate of socioeconomic attainment than children in two-parent families (Garfinkel and McLanahan, 1986; McLanahan and Bumpass, 1988). This research indicates that the same anti-poverty policy interventions may

¹ See Goldberg and Cremen, (1990) for a review of this issue in OECD and East European countries.

have different success rates depending on household composition, and indicates that special measures may be needed for female-headed households.

The purpose of this study is to analyze the characteristics and behavior of female-headed households in urban Brazil and to identify some of the consequences of the growth of these households for child welfare. We do this by identifying the types of female-headed households that are found in Brazil, which ones are more likely than others to be poor, why they are more likely to be poor, and the consequences of poverty and female headship for children in these households. One problem with analyzing these questions in other developing countries has been the representativeness of the data (ICRW, 1988). Headship is often loosely defined at the interview stage, and therefore the meaning of this variable in survey data is sometimes ambiguous, and can represent interviewer bias rather than an actual headship situation from an economic point of view. For this reason, we begin by analyzing whether the economic role of women in households designated as "female-headed" in our data set is actually different from the woman's role in those designated "male-headed." Finding that the gender of the reported head is indeed usually the gender of the person most responsible economically for the welfare of the household (in the case of both male and female heads), we then ask what types of female-headed households are found in Brazil, and why these households are more likely to be in poverty. Do female-headed households have a lower number of earners (or a lower participation rate among the potential earners), earners with less income-earning power (human capital) or more mouths to feed? Are the answers to these questions fundamentally different when discussing male-headed households in poverty?

We find, first, that generalizations about female-headed households are difficult to make in Brazil, as this group is quite heterogeneous, including rich and poor households. However, there is one common theme among Brazilian female-headed households -- those with children (less than one-half of the total) have a much higher probability of being poor. Of those female-headed households that are poor, the main reason for this lower income is not because of a lower number of earners per capita, but because of the lower earning power of these earners. As women tend to earn less on average than do men in Brazil, a household

lacking male-earned income simply has a much higher probability of being poor. In the final section we show that Brazilian female-headed households appear to be replicating the trend observed in the United States. Even after controlling for income, children in these households are less likely to attend school and are more likely to work. While work experience *per se* is not a bad thing, as the Brazilian economy seeks to compete in the high-tech end of manufacturing and services, workers without sufficient education will suffer increasingly limited opportunities. Thus, the growth of female-headed households raises questions about the intergenerational transfer of poverty.

The data used in this study are from the Brazilian annual household sample survey data, PNAD², from various years. This survey is performed annually (except in the census years). On the whole, these data are reasonably good, but they contain a few of features that limited our analysis. First, although the questionnaire contains a number of items regarding household income, most of these are designed to measure steady income flows. The survey does a poor job of recording agricultural income. For this reason, we concentrated our analysis on urban households (covering roughly three-fourths of Brazil's population). Second, the survey contains both standard questions (asked each year) and special questions designed to explore a particular topic in-depth. For example, while sex of head is asked each year, only in 1984 were detailed questions on marital status asked. For this reason, the bulk of the data presented here are from 1984. Finally, Brazil suffered high and highly variable levels of inflation in the 1980s. The increase in inflation has made regional price differentials, already known to be a problem in the 1970s, even greater, vastly complicating the task of performing intertemporal and interregional comparisons of household income.³

Given these data weaknesses, we proceeded as follows. In Part 1, the descriptive section, we look broadly at the characteristics of female-headed households in all urban

² Pesquisa Nacional por Amostra de Domicílios, conducted by the Brazilian National Institute for Geography and Economics.

³ See Fox (1990) for a discussion of the methodological problems associated with trying to measure differences in living standards in Brazil.

areas. In Part 2, a more in-depth analysis of the determinants of poverty and the consequences for children is presented. This analysis is confined to three metropolitan areas, and poverty is defined according to relative income in each area. No interregional comparison of households by income level is attempted. While some generality is lost with this approach, we are much more confident with respect to our results for these three cases. With no aggregation of data among the areas, differences in our independent variables are not confounded by interregional price differences.

I: ANATOMY OF FEMALE-HEADED HOUSEHOLDS IN URBAN AREAS

While analysis of the female-headed household is a relatively recent phenomenon, as a family type, these households have a surprisingly long history in Brazil. According to historical records, almost 30 percent of households in the city of São Paulo in 1765 were headed by women (single women, married women whose husbands were absent, or widows). By 1802 this share had risen to 44 percent, before falling to 39 percent by 1836 (Kuznesof, 1985). Other researchers have also documented the importance of female-headed households in towns during the nineteenth century, especially in the northeast (Diaz and Stewart, 1989). Most historians attribute the high number of female-headed households in Brazil to the need for adult male labor migration in an economy that was characterized primarily by a plantation agriculture. Diaz and Stewart (1989), noting that almost 90 percent of female heads in a village in Bahia were black or mulatto (freed slave or free households), and that the adult male-to-female ratio was about even, point to the role of occupational segregation by race and gender in the sugar economy in creating these households. In the nineteenth century, as in the twentieth, female-headedness was associated with poverty.

In the latter half of the twentieth century, the share of female-headed households and families in the population has been increasing steadily after hitting a low in 1960 (Table 1). In 1960 female heads constituted only 10.7 percent of all household heads and 14 percent of family heads in urban areas. By 1986 these shares had increased by 70 percent with respect

to all households and 50 percent with respect to urban families.⁴ Starting with 1978, female-headed households are classified according to whether they have children. Over this period, female-headed households increased their share of total households by 18 percent. Not surprisingly, the fastest growth took place in the 10 largest cities in Brazil.⁵ Female-headed households without children increased faster in every region, especially in the metropolitan areas. The large cities with the fastest growth in female-headed households were Rio de Janeiro in the southeast, and Fortaleza in the northeast.

What is Meant by a Female-Headed Household?

Initially, household surveys sought to define the head of household in order to have a reference point in each household and to avoid double counting. Over time, headship has come to imply normative assumptions about authority and income-earning responsibility. These assumptions do appear to have an empirical base, as estimates of earnings functions using household survey data find a positive effect of headship after controlling for human capital variables and gender.⁶ Recently, however, the designation of headship in national household surveys (the basis for much of the analysis of female-headed households) has been questioned. It is alleged that household surveys reflect the norms of the household member questioned, or of the interviewer, rather than the relative economic importance within the household in designating the head, and that this bias has resulted in an underreporting of

⁴ The census data used by both authors provide data on households and families. Goldani (1989) analyzed urban families, while Merrick and Schmink (1983) analyzed households. Not shown in Table 1, which combines both sets of data, is the ratio of families to households. However, it is known that the ratio of families to households declined from 1960 to 1980 (Fox, 1982), and it also appears that the ratio of female-headed families to female-headed households also declined. This is probably a reflection of two trends in Brazil: (a) declining number of multi-family households; and (b) the declining share of women employed as domestics, a common employment for female heads of families in multi-family households.

⁵ These cities are actually an agglomeration of cities known as metropolitan areas, and include the major city and surrounding suburbs. In this paper, we use the term "city" to refer to these agglomerations.

⁶ See, for example, Birdsall and Fox (1985) for Brazil.

female-headed households by up to 50 percent⁷ (ICRW, 1988). Before continuing with the analysis, it is important to verify that our "operationalization" of the concept of female headship -- the designation in the household survey - performs reasonably well in separating households according to the sex of the person who bears the most responsibility for the economic welfare of the household.

To evaluate the meaning of headship in the survey data, we compared the classification of households on two alternate definitions of headship. The first definition of household head is the person who has the highest income in the household. The second measure of headship has been proposed by Rosenhouse (1989), and considers as head the person who provides the most "efforts on behalf of and commitment to the household" (p. 12). Effort is measured by the number of market-oriented hours worked, and has the advantage over the income definition of correcting for the problem of estimating the income of the self-employed. As incomes or hours worked could be very close, we also allow for joint headship where the value of the classification variable for the two highest-scoring members differs by less than 10 percent. If the survey classification is useful, in most households the same gender will be designated as head under all classifications.

The top section of Table 2 shows the distribution of female- and male-headed households in three metropolitan areas if they are reclassified according to the income criterion.⁸ The last row in the table shows that overall, this criterion turns up slightly more "pure" female-headed households than the survey classification (20 percent, compared with 18.7 percent in the survey), and that in the case of 6.4 percent of the households, any classification would be arbitrary. The nature of the difference between the head reported in

⁷ For example, in Peru, Rosenhouse (1989) found that in the collection of the Living Standards Measurement Survey data, the oldest male member of the household was listed as the head despite the fact that in one-third of the households women were the main providers. In other cases, household survey interviewers are instructed to list the oldest male present as the head, resulting in teenage children being listed as the head of household.

⁸ Note that a household will be classified as having joint headship if both potential heads are the same sex.

the survey and the head we identified is interesting. If the income criterion is applied, 17 percent of those classified in the survey as female-headed would move to the male-headed classification, but only 7 percent of those classified as male-headed would be classified as female-headed. This shows that, in Brazil, the presence of an income-earning male does not a priori exclude a household from being designated female-headed in survey data.

The middle section of Table 2 shows the distribution of households in metropolitan areas according to the "hours worked" criterion. Overall, this criterion turns up roughly the same number of female-headed households as the survey classification. However, the number of households classified as jointly-headed rises to almost one-fourth of the sample. About the same number of reported female-headed households move to male-headed under the hours-worked criterion as under the income criterion, but more reported male-headed households move to the female-headed column under the hours-worked than under the income criterion.

Putting the two criteria together in the bottom section of Table 2, we see that of the 20 percent of households classified as female-headed according to the income criterion, less than two-thirds would be classified as female headed if both criteria were used. Twenty-five percent would be classified as jointly-headed, the rest as male-headed. Of the 74 percent classified as male-headed under the income criterion, almost three-fourths would be classified as male-headed under the hours-worked criterion. If we consider that jointly-headed households have a head of the same gender as the reported head, then the concordance among the criteria is quite strong. Thus, the reported and the hours-worked criteria misclassify, relative to each other, 9 percent of all households and the income and the working criteria misclassify, relative to each other, only 7 percent of all households.

Who are the alternate heads in these households? We investigated this question for those households where the income criterion turned up a different gender of head than the one reported in the survey (Table 3). In the case of reported male-headed households, the alternate head is most likely to be a spouse, especially if the reported head is himself a labor-

force participant.⁹ However, in the case of reported female-headed households, the alternate head is most likely to be a son, suggesting that age is an important factor used by households to define their head. Given that women tend to outlive men, we suspect that a number of the reported female-headed households are actually extended-family households, with an important income contribution from an adult male relative, usually a son. To verify this assumption, we looked at the number of households in which at least one member is older than the reported head and is not the head's spouse. In 94 percent of reported male-headed households and 92 percent of reported female-headed households, the head is the oldest member.

Overall, in over 90 percent of households, the household survey data designate as head of the household an adult who is the same gender as at least one of the adults most responsible for the family's economic welfare. For that reason, we continued to use the reported head in our analysis. If a net gender bias exists in the headship designation, it favors female headship, as female-headed households were more likely to be reclassified than male-headed households. This bias toward female headship designation appears to be a result of an age bias, as women live longer and therefore are more likely to be named head. Nonetheless, this analysis suggests that some caution is warranted in using the headship concept too narrowly in a situation like that found in Brazil, where most households depend on more than one income-earning member.

Characteristics of Female-Headed Households

Female-headed households in urban Brazil are a heterogeneous group (Tables 4 and 5). Given the analysis above, it is not surprising that female heads are on average about seven years older than male heads, and a substantial portion are widows.¹⁰ Household type differs by region. Female-headed households are most likely to be found in the northeast,

⁹ This was confirmed in a special tabulation, not shown.

¹⁰ Note that marital status information is available only for women under the age of 56.

the poorest region, and least likely to be found in the south. Female-headed households in the more developed southeastern and southern regions are also less likely to have children. Nonetheless, given the tremendous regional differences in Brazil in income, economic structure, and culture, it is striking that the differences in prevalence between regions are not stronger.

Only one-third of urban female-headed households correspond to the Moynihan stereotype of a single mother and her children.¹¹ Over one half of female-headed households have no minors living in the household. Of those without minors, 40 percent are single, while 44 percent have an adult child living in the household. Where there are minor children in the household, another adult is also likely to be present. On the whole, female-headed households tend to have slightly fewer adults than the average for Brazil, and the adults are more likely to be women. Among all female-headed households, the largest group comprises single women. Divorce¹² is the most usual route to female-headedness for those with minors in their household (39 percent), but 30 percent of female heads with under-age children never married, and 28 percent are widowed (perhaps providing for their grandchildren). The heads of the Moynihan-type households are among the youngest in the group, and the most likely to have been divorced.

The economic characteristics of female-headed households are different from the average in Brazil on a number of dimensions (Table 5). Although the per capita income of urban female-headed households is 89 percent of that of all urban households, the average income of female heads is 50 percent of the average in urban Brazil. This discrepancy

¹¹ Moynihan (1965) was one of the first to bring to national attention in the United States the problems of poor single mothers with children among African-American households, sparking an intense debate regarding public policy and female headship. Among other things, Moynihan was accused of racism and of stereotyping women in his pioneering work (see Wilson and Neckerman, 1986, for a discussion). Nonetheless, his work is credited with raising the issue of household structure and poverty, and is still widely discussed in the United States today.

¹² In the Brazilian survey, the classification "divorced" includes couples who have separated but have not legally terminated the marriage.

suggests that these households depend heavily on other household members' income for support. If the average dependency ratio was the same as in male-headed households, the per capita income of these households would be poor indeed. Female heads appear to have less income-earning capacity than their male counterparts. Female heads have, on average, less education than their male counterparts, which is not surprising given that (1) female heads are older, and older cohorts tend to have less education; and (2) within older cohorts, women tend to have less education than men (Lam, et al., 1992). Note that the female head's older age on average does not necessarily mean more work experience, given the need to take time out from paid employment in order to have children. Female heads are much less likely to be economically active. This partially explains why these households tend to get a lower share of income from the household head.

In sum, female-headed households are well identified in household survey data in Brazil. They are, however a heterogeneous group, containing rich and poor, widows and divorcées, and including a number of male earners. Despite their heterogeneity, in the aggregate this household type does possess some characteristics significantly different from male-headed households. One of those is the tendency for these households to be overrepresented among the poor. Previous studies, including Fox (1982), Merrick and Schmink (1983), and Pastore, et al. (1983), analyzing data from the 1960s, 1970s, and 1980s, and using various definitions of poverty, all found that female-headed households had a 30-50 percent greater chance of being in poverty than did male-headed households. We now turn to an analysis of the causes and consequences of this association using our survey data. We focus especially on female-headed households with children, as this aspect in particular has been underanalyzed in previous studies.

Urban Poverty in Brazil

Using a poverty line of about \$US300 per capita per annum in 1985 (roughly 13 percent of Brazil's per capita GDP), about one-fourth of Brazil's population is in poverty.¹³ Slightly under half of those living in poverty reside in urban areas. Poverty in Brazil is correlated with demographic factors as well as the income-earning characteristics of the household head. Regionally, 47 percent of urban poverty (and 55 percent of total poverty) is in the northeastern region, where the per capita income is about 60 percent of the country as a whole. Poor urban households tend to have fewer earners, more children, and a higher dependency ratio than the average for all urban households. Heads of poor urban households are as likely to be economically active as the average for urban Brazil, but their education level is, on average, 40 percent lower, their average hours worked and unemployment rates are higher, and thus the average income of the head and the household is lower. Twenty-two percent of poor urban households are headed by women, indicating that these households have a roughly 20 percent greater chance of being in poverty than the average Brazilian household.

Earlier, we saw that female-headed households exhibit different economic characteristics from other households. Are female-headed households who are poor also different from other poor households? To answer this question, we compare the characteristics of poor urban households with those of poor urban female-headed households, and poor female-headed households with children (Table 6). We disaggregated this analysis by region in order not to confound the analysis with the strong regional effect on poverty of the northeast, the area with the highest incidence of female-headedness as well.

In all areas, female-headed households have a somewhat higher incidence of poverty. What is striking about Table 6, however, is the poverty rate for female-headed households

¹³ The analysis of the correlates of poverty is taken from Fox (1990). The poverty line used and the analytical issues associated with this line are described on pages 2-6 of that paper.

with children and no other adult. In the northeast, nearly two-thirds of these households are in poverty, while in each of the southern regions, over one-third are in poverty. Even among the poor, female-headed households are still smaller, with a smaller number of children. Clues to the high poverty rate among female-headed households with children and no adults can be found by comparing their household characteristics. While these households have roughly the same number of children as do other poor households, they have a lower number of earners, and consequently a higher dependency ratio. With respect to income-earning characteristics, poor female heads with children actually have slightly higher education levels than all female heads on average. Yet their average income is lower than other poor households (although not lower than all female-headed households on average). One factor influencing the lower earnings is undoubtedly the tendency for female heads to work fewer hours. It is possible that for a female head of household in Brazil, the responsibilities of household maintenance, parenting, and so forth, are not always compatible with full-time employment. Easing this trade-off will need to be an important part of an anti-poverty strategy for these households.

We have established that even after controlling for regional differences, female-headed households are more likely to be poor than other households, despite some favorable factors, including a lower dependency ratio. Female-headed households with children are especially susceptible to poverty, a troubling result. In the next stage of the analysis, we look more in-depth at why that is so, and how it affects the children in these households.

II: THE DETERMINANTS OF POVERTY AMONG FEMALE-HEADED HOUSEHOLDS IN METROPOLITAN BRAZIL AND THE IMPLICATIONS FOR CHILD WELFARE

For the next stage of the analysis, two innovations are adopted: (1) we confine our analysis to three metropolitan areas; and (2) we modify slightly our definition of household income. The metropolitan areas chosen for in-depth analysis are Recife, São Paulo, and

Porto Alegre. Each is distinct in economy and culture. São Paulo is the largest metropolitan area in the country, the one with the highest average per capita income, and also the most industrialized area. Recife and Porto Alegre are similar in size, both being considerably smaller than São Paulo. Recife is the largest metropolitan area in northeast, and has a high incidence of both poverty and female-headed households. Porto Alegre is the largest metropolitan area in southern Brazil; it has a relatively homogeneous population and an average level of income close to the level for São Paulo.

Overall income levels vary a great deal across the three regions our cities represent, as does the distribution of households according to their per capita adult income, and, consequently, the income brackets used to group households. Table 7 shows this difference for our three cities. Brazilian income distribution is one of the most unequal in the world; in 1987 the lowest 50 percent of households (grouped by per capita income) received only 12 percent of total household income, while the top 5 percent received 24 percent (Fox, 1990). As we are primarily interested in the poor, we cut off our analysis of income groups at the bottom 50 percent. Virtually no difference exists between São Paulo and Porto Alegre with respect to mean income in these percentiles. The mean income for households in the same percentiles for Recife, however, tends to be considerably lower; close to one-half of those for São Paulo and Porto Alegre. Although it is likely to be true that households in the same income class are poorer in Recife than in São Paulo and Porto Alegre, there are no guarantees that this is in fact true owing to the problem of regional price differences.

Female-headed households in the three metropolitan areas mirror the similarities and differences in all urban areas noted above (Table 8). Recife, in the northeast, has more female-headed households per capita, and these households are much more likely to contain minors. Among households with children, the average number of children is slightly higher in Recife, as is the dependency ratio. Female heads of households in Recife are more likely to be widowed and less likely to be economically active, although they are only marginally older on average. While average incomes by fractiles of the income distribution are about

the same in both Porto Alegre and São Paulo, heads of female-headed households tend to have a slightly higher income in Porto Alegre.

Measuring Income in Female-Headed Households

In this part of the analysis, we rank households according to a slight modification of the traditional concept of household per capita income. Specifically, for the rest of the paper, household income is defined as the income from all sources of all adult members (over age 18) of the household divided by the total number of members in the household. We do this because we seek to assess how outcomes for children (such as their labor-force participation and school attendance) depend on the rank of their household in the income distribution. Hence, it is useful to be able to measure the household resources without the contribution of non-adult members, in order to prevent households from upgrading their ranking by using their children in the labor market.¹⁴

To what extent does the exclusion of the income of non-adult members really have an impact on the ranking of households? In other words, to what extent do poor households in fact upgrade their rank by allocating children and teens (under age 18) to the labor force? To answer this question, we performed a simple experiment using data from the São Paulo metropolitan area, classifying households by their per capital adult income and by their per capita total income (Table 9). Ninety-four percent of all households are classified in the same relative income group whether we rank them by per capita adult income or per capita total income, and only 3 percent move up to a higher group. The proportion of households that remain in the same class, however, varies considerably from income class to income class. Poorer households rely much more heavily on the income of minors. Among those

¹⁴ Ideally, we would like to rank households based on the resources that they would have in the case that all children were attending school and out of the labor force. The income measure we use -- the adult total income per capita -- would equal this ideal measure whenever the labor supply of the household adult members was not influenced by the way in which the non-adult members allocate their time. We consider our measure preferable to one that would confound the analysis of children's labor-force participation because children's income is included. For a further discussion of this issue, see Barros and Mendonca (1990).

classified as being in the poorest group based on the ranking by per capita adult income, only 88.3 percent are also in this group according to the rank by per capital total income, whereas among those classified as being in the top group according to the per capita adult income, almost 99 percent are also classified as non-poor according to the per capita total income.

Counting only the income of adults, we confirm once again in Table 10 that female-headed households are overrepresented at the lower end of the income distribution. This table shows the share of three types of female-headed households in each income class. The top half of the table shows the absolute incidence of female-headed households in each income group, while in the bottom half each cell is weighted by the share of their type of household in the population in each city. When the number in the bottom half of Table 10 is greater than 1.0, the household type is overrepresented in the income group. We also note a second trend -- the lower the relative income, the higher the likelihood that the household will be female-headed. Furthermore, while female-headed households are clearly overrepresented in the lower one-fourth of the income distribution in each city, the degree of overrepresentation is much greater among female-headed households with minors and greatest among the Moynihan-type households.¹⁵

Why Are Female-Headed Households Poorer?

Female-headed households are relatively poor in Brazil. Table 11 shows, for each city, the gap between the average per capita income of all households and the average per capita income of female-headed households (in minimum salaries). In the last column, the percentage difference in the mean incomes between female-headed households and others is

¹⁵ This type of analysis is imprecise because of the problem of boundness. For example, if we invert the ratios in the bottom half of Table 10 (that is, take the inverse of each cell), the size of the difference between one cell and the other will change. To check for this problem, we performed a logit analysis on the first row in Table 10, the lowest income group. This analysis confirmed the results in Table 10. Female-headed households with children are indeed overrepresented compared with all female-headed households, and the Moynihan-type household is three times as overrepresented as are all female-headed households. For more details, see Barros, et al., (1993).

calculated. For female-headed households with children, the average income gap is about the same in each city, while for all female-headed households, the gap is much greater in Recife, and there is virtually no gap in Porto Alegre. Once again, the heterogeneity of female-headed households is observed. These results raise two questions. First, is there a common explanation across cities for the noticeable income gap between female-headed households with children and other households? Second, why are female-headed households relatively poorer in Recife when compared with other households in the same area?

Household income per capita can be disaggregated into the following factors:

- the number of earners (the proportion of adults with positive income);
- the average income of the earners (the earning capacity); and
- the ratio of the number of children to the number of adults (the dependency ratio).¹⁶

A class of households may be overrepresented among the poor if (1) few adults have positive income -- available earnings capacity is used less intensively, either because of a lower income per hour or a lower number of hours worked; (2) the income of the earners is low -- a smaller earnings capacity; or (3) the dependency ratio is high.

In order to measure the importance of each factor in contributing to the relative income gap of female-headed households in each city, we performed a counterfactual simulation. For each of the household composition variables listed above (e.g., earnings

¹⁶ Algebraically, this can be stated as follows:

$$y = y_i (p) / (1 + d)$$

where:

- y = household income per capita
- y_i = average income among adults with positive income
- p = proportion of adults who have income
- d = ratio of adults to non-adults

capacity, intensity of earnings capacity use, and the dependency ratio), we asked the following question: What would the income gap between female-headed households and other households be if the average in female-headed households on one variable was the same as the average in the other households?¹⁷ In other words, what is the contribution of a lower value, on average, of this variable to the income gap between household types?

The relative difference in means among household types and the percentage point reduction in the income gap between female-headed households and other households resulting from this simulation is shown in Table 12. Across metropolitan areas, the highest reduction in the average poverty gap comes from the earnings capacity simulation. This is not surprising, as the greatest difference in means among groups appears on this variable. If earners in female-headed households had the average income of earners in other households, their average per capita income would be above the average for other households in all three areas. If earners in female-headed households with children had the same earnings capacity as other households, the average income gap would fall by two-thirds. As adults in female-headed households tend to have high participation rates, changing the utilization of earnings capacity to that of the average household actually increases the income gap. Indeed, an income gap appears between female-headed households and other households in Porto Alegre, where it did not exist before. Changing the dependency ratio to the average among households reduces the income gap for female-headed households with children, as these tend to have a higher dependency ratio, but not for all female-headed households, who as a group have a slightly lower dependency ratio.

The difference in average earnings is, therefore, the common reason for lower income across female-headed households. Given the importance of this variable in accounting for

¹⁷ The simulation procedure is described extensively in Barros, et al., (1993). The basic idea was to change the mean of the variable but maintain the distribution in the class of households (female-headed household, or *F*, and others, or *O*). Thus, for each simulation, the value of the variable *x* in each household was increased by a scalar (*s*), such that:

$$s = x_f / x_o ; \text{ where } x_f \text{ and } x_o \text{ are the means of variable } x \text{ for households in classes } F, O.$$

the income gap, it is useful to further disaggregate the earnings capacity variable, comparing the average earnings of (1) males and females, and (2) heads and nonheads. This is done because, all other variables being equal, in Brazil, heads and men tend to earn more than nonheads and women (Birdsall and Fox, 1985). Following the previous approach, earnings capacity may be lower in a given class of households because:

- males in these households have a smaller earnings capacity;
- females in these households have a smaller earnings capacity;
- more of the earners are female;
- heads of these households have a smaller earnings capacity;
- nonheads may have a smaller earnings capacity; or
more of the earners are nonheads.

The same simulation procedure as above was repeated for these six variables. The relative difference in means and the reduction in the poverty gap resulting from the simulation are shown in Table 13.

The simulation results show that lower incomes among earners in female-headed households are not due to smaller earnings capacity among female earners, or primarily to a lack of male-earned incomes, but to a lack of earners with the earnings capacity of males in other households. The earnings of males in female-headed households (who tend to be secondary earners) is, on average, one-third to one-half of that of female earners in either type of household. Equating the male earnings capacity among female-headed households with that of other households would reduce 20 to 30 percentage points of the observed income gap, with a higher effect in female-headed households with children (where the difference in means is greater). This is because males in male-headed households are not secondary earners, so they have higher earnings on average. Although there is a large difference between female-headed households and other households in the percent of female earners, reducing this percent had virtually no effect on the income gap, as the males in female-headed households have an average income roughly equal to the females in these

households (which, in turn, is similar to those in other households). Therefore, equating this variable across households makes no difference to the income gap.

The effect of the male-female earnings differential in Brazil shows up again in comparing the mean earnings of heads. While the average earnings of secondary earners is about the same in both types of households, the average earnings of female heads is about one-half that of male heads. If female heads had the earnings capacity of male heads, the income gap would disappear in all households.

In sum, female-headed households tend to have a lower income than other households primarily because of the average earnings of the female head. As women who participate in the labor force tend to have, on average, the same education as men in a given age cohort, supply- or demand-side discrimination is clearly an important factor.¹⁸ Supply-side discriminatory factors include (1) fewer hours worked, and (2) the tendency of women to work in occupations that pay lower salaries (an effect of occupational segregation), or within occupations in lower positions.¹⁹ Demand-side discrimination includes both the failure of employers to hire women for higher-paying jobs for which they are qualified, or the failure to pay them salaries that are equal to those of their male counterparts. The relative importance of these factors is not the subject of this work. However, the lesson from this analysis is that raising female heads' incomes, especially those of female heads with children, is an important element of a poverty-reduction strategy.

¹⁸ We use the word "discrimination" to encompass a range of actions based on prejudices or stereotypes which generate outcomes systematically different for men than for women. The discriminator may be a man or a woman, including the female head herself (e.g., choice of occupation).

¹⁹ Birdsall and Fox (1985) found evidence both of occupational segregation and wage discrimination affecting women's salaries in Brazil.

Children in Female-Headed Households

Concern about the growth of female-headed households is partly motivated by the potential consequences of this household structure for the welfare of children. Poor households in Brazil, as in other countries, are more likely to contain more children, and as a result, minors are generally overrepresented in the bottom third of the income distribution. However, even though female-headed households with children are overrepresented among poor households in our case studies, this does not imply that children living in female-headed households are over-represented among poor children. Given that female-headed households have a lower number of children on average, it is possible that they are not. Table 14 presents a distribution of children across income class for each metropolitan area, among all minors and those living in a female-headed household. Table 15 shows the relative incidence of minor children living in female-headed households, indicating the degree of overrepresentation. Not only are children much more likely to live in poor households, but poor children are quite likely to live in female-headed households. Indeed, minor children in female-headed households are more overrepresented among the poor than are female-headed households as a whole.

Children in female-headed households tend to be older (Table 16). In all three cities, older children are overrepresented in all income groups. However, younger children in female-headed households are disproportionately concentrated in poor households, as the ratio between the average share in all income groups and the average share in the lowest income group is highest for the youngest children.²⁰

Are children in female-headed households worse off than other children in their income group? It is well known that poverty is hard on children (National Commission on Children, 1991; Wood, 1989). However, what we attempt to analyze is whether the female-headed household structure exerts a separable, independent effect on children, above and

²⁰ This result was also verified by a logit analysis. See Barros, et al., (1993) for details.

beyond the poverty effect. This is done in steps. First, we evaluate the performance of children in female-headed households compared with all children with respect to childhood outcomes. Next, the portion of any performance difference due to the tendency to be in poverty is identified (e.g., the sensitivity of the outcome variables to household income), with the remainder of the difference attributed to an independent effect of female headship. Evidence of an independent effect would indicate that the consequences of poverty are more severe for children in female-headed households than for all children.

The PNAD data set allows the analysis of two potential outcomes for children: school attendance and labor-force participation. We interpret a lower rate of school attendance for children as an indicator that children are worse off. The interpretation of the labor-force participation of children and their well-being is more complex. It is not necessarily true that holding children out of the labor market will benefit society. For example, consider the case in which some families in the society are very poor and children in these families can find jobs that (1) will permit them to continue attending school; and (2) will pay them wages that are high enough to alleviate their poverty. In this case, it seems that society will be better off permitting children to work. However, if children work at the expense of school attendance, when basic reading, writing, math, and problem-solving skills are being taught, labor-force participation is clearly disadvantageous in the long run. An increase in the labor-force participation of children that leads to reductions in school attendance probably leads to a reduction in society's welfare. By contrasting the school attendance of children who live in female-headed households and who work with the attendance rate of all children in the labor force, we can investigate the extent to which children in female-headed households have more difficulty than other children in resolving the conflict between studying and working. We analyze school attendance separately for children ages 7-9 and ages 10-14. Due to the nature of the PNAD questionnaire,²¹ we have to limit our study of labor-force participation to children aged 10 to 14 years.

²¹ Labor market-related questions are applied only to persons 10 or more years old.

With respect to all outcomes, children in female-headed households appear to be worse off in Recife, but the contrast is not quite so stark in the other two cities (Table 16). Among 7-9 year-olds in São Paulo and Porto Alegre, children living in female-headed households have school attendance rates very similar to that of all children in the same metropolitan area and age group. For both age groups in Recife and for 10-14 year-olds in São Paulo and Porto Alegre, children living in female-headed households have lower school attendance rates than all children in the same age group and metropolitan area. In São Paulo and Porto Alegre, only in female-headed households do school attendance rates decrease dramatically with age. In each metropolitan area, the labor-force participation rate of children 10 to 14 years old living in female-headed households is higher than that of all children in the same area. Surprisingly, labor-force participation rates are higher in the wealthier cities of São Paulo and Porto Alegre than in Recife. This may be the result of better labor-force conditions in the southern cities.

The data in Table 16 do point to a conflict between work and school for children in female-headed households. Among children in the labor force, the proportion not currently attending school is higher among those living in female-headed households. The magnitude differs by metropolitan area. The greatest difference is found in Recife. In São Paulo and Porto Alegre, the difference is not significant. São Paulo is notable, as children in this city appear to be the best at combining school and work.

Isolating the Poverty Effect

A large body of literature supports the notion that the level of household resources is an important determinant of children's outcomes in Brazil.²² As children in female-headed households are much poorer than children living in non female-headed households, it could be that differences between children in female-headed households and all children, as those reported in the previous section, are simply a consequence of the greater poverty among

²² See Calsing and Schmidt (1986), Cornia (1984), and Barros and Mendonca (1990).

children in female-headed households. In other words, are variations in children's outcomes across households with different structures really due to differences in the structures of the household per se or are they entirely due to other differences across households, like household income, which are associated with differences in household structure?

Children's outcomes in the three metropolitan areas are indeed sensitive to income (Table 17). School attendance increases and labor force participation decreases for all metropolitan areas in a monotonic fashion. The percent of working children not in school also declines with income. Thus, it is quite possible that most of the female-headed household effect observed above is actually a poverty effect. To isolate the poverty effect, we once again perform a counterfactual simulation. First, we estimate the outcome for children in female-headed households by income class. Then we give children in female-headed households the same distribution of income as all children have (i.e., we raise the average income of female-headed households). We then estimate the new outcome. The difference between the new outcome (fhh^*) and the old outcome (fhh) is the impact of poverty. The remainder is the pure female-headed household effect.²³

The results of this simulation are shown in Table 18. The results vary substantially by metropolitan area. In São Paulo, which has the best outcomes for all households and the smallest difference between female-headed households and other households, most of the observed outcome difference is due to a female-headed household effect. Raising the income of female-headed households with children would eliminate one-third or less of the difference observed in outcomes. In Recife, lower incomes explain much more of the difference in child outcomes -- 70 percent of the difference in school attendance rates for children age 10-14, and 80 percent of the labor-force participation rates. In both Recife and São Paulo, income plays a much more important role in explaining outcome differences in older children than in younger children, but in Porto Alegre, the reverse is true. In Porto Alegre, giving

²³ With any decomposition, an index-number problem arises. Rather than present two sets of numbers, we present those showing the lowest female-headed household effect. For an algebraic exposition of the decomposition and simulation procedure, see Barros, et al., (1993).

female-headed households more income would actually result in children spending slightly less time in school. This result reflects the insensitivity of this outcome to household resources in this metropolitan area.

CONCLUSION

In this study we have provided an "x-ray" of female-headed households in Brazil. One of the first conclusions of the analysis is that female-headed households are a heterogeneous group, showing strong variation by region. Female headship is more common in the northeast, and increases with urbanization. Women become female heads through various routes. One route is the termination of marriage, either through divorce (most common) or widowhood, but the most common route for women in Brazil is to never marry. Less than half of female-headed households contain dependent children, and only about one-third are characterized by the stereotypical "single mother."

Female-headed households are not, on average, a "vulnerable group" in Brazil, as some are quite well-off. Others are very poor, and this subset of female-headed households is quite vulnerable. The extent of the poverty among female headed-households varies substantially by region. In the northeast, the female-headed households are, on average, poorer, especially in the metropolitan area of Recife, compared with Porto Alegre in the south, where there is virtually no gap. Female-headed households with children do show a wide income gap when compared with other households, especially for the single-mother-household type. Although this type is small in terms of percent of households in Brazil (in urban areas, only 3.4 percent of households), the strong tendency of this group to be poor and the consequences with respect to child outcomes in these households of the interaction between poverty and household structure, is worrisome. This effect is even more worrisome when the strong tendency for poor children to be in female-headed households is considered.

Female-headed households have lower incomes not because they have more children, or fewer adults, but because the head of the household, being female, earns less. This

female head does not earn less than other females -- on the contrary. If female heads earned as much as male heads, female-headed households would have an average income above that for other households, and fewer single-mother households would be in poverty. This analysis shows that the best interventions for the elimination of poverty in this group are those that focus on (1) ending wage discrimination; and (2) ending occupational segregation. Interventions that focus on raising skill levels and educational attainments of the whole work force, including women, should also be useful in alleviating absolute poverty, although not necessarily the relative income differences identified here. "Workfare" or public employment policies would not be of particular benefit to this group, since most are already participating in the labor force.

Given the heterogeneity of female-headed households, and the income spread, programs targeted to this group would not be particularly progressive (although they may be welfare-enhancing for other reasons). However, our results suggest the need for special interventions for children in female-headed households, given their tendency to stay out of school. School attendance is highly correlated with income, so it is not surprising that children in female-headed households have poorer attendance records when compared with all children. What is surprising is that even controlling for household income, children in female-headed households have poorer school attendance records than other children. This is especially true in the case of older children, who are more likely to be in the labor force and out of school. This finding indicates that in female-headed households, the challenge of balancing the desire (perhaps need) to earn additional income with the desire for additional educational attainment is particularly problematic. One possible explanation for this result may be that female heads are "time poor" (Vickery, 1977). In other words, female heads simply do not have enough hours in the day to work, maintain a household, and make sure their children get an education. Another possible explanation is that, given the lower returns to education for women in Brazil, in raising their children, female heads value education less than labor force experience. Clearly, this issue requires further study.

An interesting result is the stronger association between poverty and female headship in the poorer area of Recife than in the richer metropolitan areas in the south. It is often assumed that poverty among female-headed households is one of the most difficult forms of poverty to eradicate. However, those who hold this belief would predict that female-headed households would be more overrepresented among poor households in the richer cities, not the converse, as we found. Obviously, differences in other variables known to be important in explaining household composition could fully account for this result, including cultural differences, patterns of labor migration, and the like. This issue also suggests the need for further analysis, beyond the scope of this paper.

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Table 1: Brazil - Indices of Growth of Female-Headed Families and Households, 1960-1987

Share of Female-Headed Families and Households (1960-1986)
(percent)

Year	Urban Areas (share of families)	All Brazil (share of households)
1950	-	12.1
1960	14.0	10.7
1970	15.7	13.0
1980	18.0	15.6
1986	20.6	18.4

Sources: Merrick and Schmink (1983), Goldani (1989), and author's tabulations

Growth of Female-Headed Households in Urban Areas by Location (1978-1986)
(percent change in share)

Location	FHH	FHH with children
All Brazil	18	14
Center/Northwest	13	0
Southeast	26	16
Northeast	5	0
South	21	16
Metropolitan Areas	33	14

Source: author's tabulations

Families Headed by Females by Metropolitan Area (1978-1987)
(percent)

Metropolitan Area	1978	1981	1982	1983	1984	1985	1986	1987	Percentage change in share, 1978-1987
Northwest									
Fortaleza	18.8	21	21.2	22.2	22.2	23.8	21.6	24.6	30.8
Recife	22.7	24.3	23.6	23.6	25.5	25.6	23.2	27.2	19.8
Salvador	20.8	21.7	22.2	22.5	23.8	25.3	25.4	26.2	26
Southeast									
Belo Horizonte	20.3	20	19.9	21.7	21.9	23.3	23.9	23.9	17.7
Rio de Janeiro	18.3	21.2	21	21.7	23.1	23	24.1	24.3	32.8
Sao Paulo	15.3	16.4	16.2	17.2	18.7	18.8	20.7	19.1	24.8
South									
Curitiba	14.5	17.3	15.1	15.5	18.9	18.4	18.1	18.1	24.8
Porto Alegre	16.9	19.1	4.75	19.4	20.3	20.5	21.3	21.2	25.4
Center/Northwest									
Belem	23.5	24.7	23.7	25.7	26.1	25.6	27.5	27.1	15.3

Source: author's tabulations

**Table 2: Brazil - Distribution of Households According
to Headship Criteria, Metropolitan Areas, 1984**
(percent)

Reported Headship	Actual Headship, Income Criterion			
	Male-headed	Female-headed	Joint-headed	Total
Male-headed	86.6	7.3	6.1	100
Female-headed	17.2	75.2	7.6	100
All	73.6	20.0	6.4	100

Reported Headship	Actual Headship, Hours Worked Criterion			
	Male-headed	Female-headed	Joint-headed	Total
Male-headed	67.6	9.1	23.3	100
Female-headed	17.4	58.1	24.5	100
All	58.1	18.3	23.6	100

Income Criterion	Hours Worked Criterion			
	Male-headed	Female-headed	Joint-headed	Total
Male-headed	73.2	6.2	20.6	100
Female-headed	12.2	63.3	24.5	100
Joint-headed	28.4	16.4	55.2	100

Source: author's tabulations

**Table 3: Brazil - Distribution of Non-Reported Income Heads
By Kinship to Reported Head, Metropolitan Areas, 1984**
(percent)

Kinship of Income Head to Reported Head				
Sex of Reported Head	Spouse	Offspring	Other Relative	Total
Male	69	25	6	100
Female	3	74	22	100

Source: author's tabulations

Note: Joint-headship cases are excluded.

Table 4: Types of Female-Headed Households (FHH) in Urban Areas
(percent)

Share of Total, All Urban Areas, 1984

Female-Headed Households	18.2
- without husbands	17.9
- with minors (under 18)	8.2
- with minor children	7.5
- with adult children	4.3
- with minor children, no other adult	3.4

Regional Distribution (1986)

	Northeast	North/Center	Southeast	South	Metropolitan Areas
FHH as share of total population	21	18	19	17	20
Percent of FHH without adult male	61	61	63	64	65
Percent of FHH with children	52	55	37	41	40
Percent of FHH with children without adult male	33	33	26	24	25

Distribution by Marital Status (1984)

Marital Status	All FHH	With Minors	With Minors No Adults
Single	37.7	30.0	35.9
Married	2.6	2.7	1.8
Widow	25.9	28.2	19.1
Divorced or Separated	33.8	39.1	43.2

Source: author's tabulations

**Table 5: Brazil - Characteristics of Urban Female-Headed Households (FHH)
Compared With All Urban Households, 1984**

Characteristic	FHH	All
Share of households (percent)	18.2	100.0
Average income per capita (minimum salaries)	1.6	1.8
Household Composition		
Household size	3.2	4.2
Number of minors	0.9	1.5
Number of adults	2.1	2.5
Share of household with another adult (percent)	56.0	38.0
Number of people with positive income	1.9	1.9
Share of households with children (percent)	45.0	64.0
Share of adults who are women (percent)	84.0	54.0
Dependency ratio (children per adult)	0.6	0.7
Characteristics of Head		
Age (years)	51.0	44.0
Education (years)	4.4	5.4
Mean income (minimum salaries)	2.2	4.4
Percent economically active	48.0	78.0
Share of household income earned by head (percent)	65.0	74.0

Source: author's tabulations

**Table 6: Brazil - Characteristics of Poor Urban Households
by Region and Household Type, 1984**

(percent)

Characteristic	Northeast	Southeast	South
Incidence of Poverty			
All households	33.2	11.1	12.4
All female-headed households (FHH)	35.7	14.3	14.9
FHH w/children, no adults	62.3	36.5	37.4
Characteristics of Poor Households			
Average Family Size			
All households	5.6	5.2	5
All FHH	4.5	4.1	3.9
FHH w/children, no adults	4	3.8	3.6
Average Number of Children			
All households	2.8	2.6	2.5
All FHH	2.1	1.9	1.9
FHH w/children, no adults	2.6	2.5	2.3
Average Number of Earners			
All households	1.2	1	1
All FHH	0.9	0.8	0.7
FHH w/children, no adults	0.6	0.6	0.6
Dependency Ratio			
All households	1.3	1.3	1.3
All FHH	1.4	1.4	1.5
FHH w/children, no adults	2.6	2.5	2.3
Characteristics of Heads of Poor Households			
Mean Income (in minimum salaries)			
All households	0.9	0.87	.088
All FHH	0.56	0.56	0.63
FHH w/children, no adults	0.63	0.67	0.73
Mean Education			
All households	2.6	3.6	3.3
All FHH	2.4	3	3.1
FHH w/children, no adults	2.5	3.5	3.6
Mean Age			
All households	44.3	42.4	42.9
All FHH	48.3	46.7	46.9
FHH w/children, no adults	41.7	38.9	39.8
Mean Hours Worked Per Week			
All households	33	30.1	31.3
All FHH	18.7	17.8	17.3
FHH w/children, no adults	22.6	25.1	23.7

Source: author's tabulations

**Table 7: Brazil - Per Capita Income of Household Groups,
Three Metropolitan Areas, 1984**
(multiples of minimum wage)

Percentile of Income Distribution	Recife	São Paulo	Porto Alegre
Lowest 5th	0.12	0.28	0.29
Lowest 10th	0.18	0.42	0.41
Lowest 25th	0.32	0.75	0.72
Lowest 50th	0.60	1.36	1.35

Source: author's tabulations

Note: Income refers to the sum of the income from all sources of all adult members of the household.
Adult members include the household head, his or her spouse, and all other members age 18 or more.

**Table 8: Brazil - Characteristics of Female-Headed Households (FHH)
in Three Metropolitan Areas, 1984
(percent)**

	Recife	São Paulo	Porto Alegre
Share of Total Households			
All FHH	21.8	16.5	18.5
FHH w/ minors	11.6	6.2	6.7
- no adults	3.7	2.6	3.1
Share of Total Minors			
All	15.0	9.5	10.8
Age 0-6	12.9	7.0	8.8
Age 7-9	15.6	10.0	11.5
Age 10-14	17.6	13.6	15.0
Per Capita Income (minimum salaries)			
All households	1.3	2.5	2.6
FHH	1.1	2.4	2.6
FHH w/minors	0.6	1.2	1.3

Characteristics of Female-Headed Households

Characteristics of Heads			
Percent economically active			
All FHH	44.0	55.0	53.0
FHH w/minors	51.0	68.0	64.0
Average age			
All FHH	51.0	49.0	50.0
FHH w/minors	47.0	43.0	43.0
Average income (minimum salaries)			
All FHH	1.7	3.0	3.4
FHH w/minors	1.4	2.6	2.9
Marital Status			
Single	37.6	37.8	40.7
Married	0.9	2.3	1.7
Widowed	27.0	20.7	22.0
Divorced	34.5	30.2	35.6
Characteristics of Households			
Average number of children			
All FHH	1.2	0.7	0.7
FHH w/minors	2.2	1.9	1.8
Dependency ratio			
All FHH	0.7	0.5	0.5
FHH w/minors	1.3	1.2	1.2

Source: author's tabulations

**Table 9: Brazil - Distribution of Households According to
Per Capita Adult Income and Per Capita Household Income,
Sao Paulo Metropolitan Area, 1984**

Adult Income Percentile	Total Income Percentile				
	Lowest 5%	5-10%	10-25%	25-50%	Above 50%
Lowest 5%	4.4	0.4	0.2	0.0	--
5-10%	0.6	3.9	0.5	0.1	--
10-25%	--	0.8	13.2	1.0	--
25-50%	--	--	1.1	23.2	0.7
Above 50%	--	--	--	0.7	49.3
Percent Reclassified	10.0	24.0	12.0	7.0	1.0

Source: author's tabulations

otes: Adult income refers to the sum of the income from all sources of all adult members (age 18 and over) of the household.
Total income refers to the sum of the income from all sources of all members of the household.

Table 10: Brazil - Absolute and Relative Incidence of Household Type by Per Capita Income Class, Three Metropolitan Areas

Income Class	Recife			São Paulo			Porto Alegre		
	All FHH	FHH w/minors	FHH w/minors No Adults	All FHH	FHH w/minors	FHH w/minors No Adults	All FHH	FHH w/minors	FHH w/minors No Adults
Absolute Incidence									
Lowest 5%	40.9	35.5	21.0	27.0	19.3	11.2	26.7	19.9	13.2
5-10%	32.2	27.7	9.9	19.7	16.7	9.7	21.6	15.9	8.4
10-25%	24.1	15.8	5.9	19.5	11.2	4.1	21.8	11.3	4.5
25-50%	21.8	12.1	2.7	14.0	5.3	1.6	16.3	6.0	1.7
above 50%	18.1	6.0	1.2	15.6	2.8	1.1	17.5	3.5	1.9
All	21.8	11.6	3.7	16.5	6.2	2.6	18.5	6.7	3.1
Relative Incidence									
Lowest 5%	1.9	3.1	5.7	1.6	3.1	4.3	1.4	3.0	4.3
5-10%	1.5	2.4	2.7	1.2	2.7	3.7	1.2	2.4	2.7
10-25%	1.1	1.4	1.6	1.2	1.8	1.6	1.2	1.7	1.5
25-50%	1.0	1.0	0.7	0.8	0.9	0.6	0.9	0.9	0.5
above 50%	0.8	0.5	0.3	0.9	0.5	0.4	0.9	0.5	0.6
All	1.0	1.0	1.0	1.0	1.0	1.0			

Source: author's tabulations

Note: Income refers to the sum of the income from all sources of all adult members (age 18 or more) of the household.

Relative incidence is the share of the house type in the income group weighed by its share in the population.

A number higher than one indicates over-representation.

Table 11: Brazil - Average Per Capita Income and Income Gap by Household Type and Metropolitan Area, 1984

Area and Household Type	Average Per Capita Income (Minimum Salaries)	Average Income Gap (percent)
Recife		
All households	1.27	-
FHHs	1.04	0.22
FHHs w/children	0.58	0.57
São Paulo		
All households	2.52	-
FHHs	2.39	0.06
FHHs w/ children	1.14	0.56
Porto Alegre		
All households	2.54	-
FHHs	2.56	0.01
FHHs w/ children	1.26	0.52

Source: author's tabulations

Note: Income Gap is equal to the average income of the household type (Y_F) subtracted from the average income of all the other houses (Y_C) divided by Y_C or $(Y_C - Y_F / Y_C)$. A negative value indicates the average income of household type is above that of other households.

**Table 12: Brazil - Simulated Reductions in Income
Gap by Household Type and Metropolitan Area, 1984**
(percent of minimum salaries)

Area and Household Type	Relative Differences			Income Gap	Simulated Income Gap		
	Earnings Capacity	Capacity Utilization	Dependency Ratio		Earnings Capacity	Capacity Utilization	Dependency Ratio
Recife							
FHH	0.61	1.18	0.97	0.22	-.40	0.36	0.23
FHH w/children	0.55	1.12	1.70	0.57	0.18	0.63	0.45
São Paulo							
FHH	0.64	1.21	0.87	0.06	-.57	0.26	0.07
FHH w/children	0.55	1.18	2.12	0.56	0.19	0.64	0.40
Porto Alegre							
FHH	0.72	1.20	0.93	-0.01	-.40	-0.21	-0.02
FHH w/children	0.62	1.17	2.33	0.52	0.32	-0.07	0.21

Source: author's tabulations

Notes: Relative difference is the average value for a given type of household divided by the average for all households.

Income gap is equal to the average income of the household type (Y_F) subtracted from the average income of all the other houses (Y_C) divided by Y_C or $(Y_C - Y_F / Y_C)$. A negative value indicates the average income of household type is above that of other households. It is reported in minimum salaries.

Simulated income gap is the estimated average income of household type (Y_F) if this group had the mean of household group (Y_C) on the simulation variable.

Table 13: Brazil - Relative Differences on Earnings Capacity and Simulated Reductions in Income Gap by Household Type and Metropolitan Area, 1984
(percent)

Area and Household Type	Male Earnings	Female Earnings	% Earnings Female	Head Earnings	Other Adult Earnings	% Area Non-Head
Relative Difference						
Recife						
FHH	.52	.97	2.44	.49	.94	0.94
FHH w/children	.45	.87	2.38	0.43	0.80	0.89
São Paulo						
FHH	.48	1.11	2.59	0.52	0.95	0.96
FHH w/children	0.35	.98	2.59	0.46	0.73	0.96
Porto Alegre						
FHH	0.45	1.17	2.44	0.61	0.93	1.09
FHH w/children	0.39	1.02	2.39	0.52	0.79	1.04
Simulated Income Gap						
Recife						
FHH	0.01	0.17	0.19	-0.89	0.19	0.22
FHH w/children	0.31	0.42	0.54	-0.43	0.44	0.60
São Paulo						
FHH	-0.19	0.23	0.03	-1.11	0.03	0.06
FHH w/children	0.24	0.56	0.59	-.47	0.42	0.56
Porto Alegre						
FHH	-0.23	0.40	0.01	-1.34	-0.03	-0.01
FHH w/children	0.21	0.55	0.49	-0.57	0.43	0.52

Source: author's tabulations

Notes: Relative difference is the average value for a given type of household divided by the average for all households.

Income gap is equal to the average income of the household type (Y_F) subtracted from the average income of all the other houses (Y_C) divided by Y_C or $(Y_C - Y_F / Y_C)$. A negative value indicates the average income of household type is above that of other households. It is reported in minimum salaries.

Simulated income gap is the estimated average income of household type (Y_F) if this group had the mean of household group (Y_C) on the simulation variable.

**Table 14: Brazil - Distribution of Minor Children and Share
in Female-Headed Households (FHH)
by Income Class and Metropolitan Area, 1984
(percent)**

Income Class	Share of Minors					
	Recife		São Paulo		Porto Alegre	
	All minors	% in FHH	All minors	% in FHH	All minors	% in FHH
Lowest 5%	9	37	10	19	11	22
5-10%	10	23	10	15	10	15
10-25%	23	14	23	13	22	12
25-50%	28	12	27	6	26	9
Above 50%	30	9	30	5	32	7
All	100	15	100	9	100	11

Source: author's tabulations

Table 15: Brazil - Relative Incidence of Minor Children in Female-Headed Households (FHH) by Income Class and Metropolitan Area, 1984
(percent)

Income Class	Share of Minors					
	Recife		São Paulo		Porto Alegre	
	All minors	% in FHH	All minors	% in FHH	All minors	% in FHH
Lowest 5%	1.8	7.4	2.0	3.8	2.2	4.4
5-10%	2.0	4.6	2.0	3.0	2.0	3.0
10-25%	2.3	1.4	2.3	1.3	2.2	1.2
25-50%	1.1	0.5	1.1	0.2	1.0	0.4
Above 50%	0.6	0.2	0.6	0.1	0.6	0.1

Source: author's tabulations

Table 16: Brazil: Outcomes For Children
By Type of Household, Metropolitan Area, 1984
 (percent of children)

Children's Age and Status	Recife			São Paulo			Porto Alegre		
	FHH	All	T-st	FHH	All	T-st	FHH	All	T-st
Age 7-9									
- not in school	23	14	3.6	8	8	0.0	12	10	1.1
Age 10-14									
- not in school	22	14	5.1	12	8	2.9	18	12	3.1
- in labor force	10	7	2.9	13	8	3.1	16	9	3.9
Age 10-14 in the labor force									
- not in school	69	56	2.2	42	36	0.9	69	67	0.2

Source: author's tabulations

Note: T-st refers to the T-statistics for testing whether the difference between FHHs and all households is zero.

**Table 17: Brazil: Outcomes For Children
By Income Class and Metropolitan Area, 1984**
(percent of children)

Children's Age and Status	Recife			Income Class São Paulo			Porto Alegre		
	< 5	25-50	> 50	< 5	25-50	> 50	< 5	25-50	> 50
Age 7-9									
- not in school	22	12	4	14	6	2	17	6	3
Age 10-14									
- not in school	21	14	4	12	7	3	18	10	4
- in labor force	10	6	2	11	8	4	13	8	3
Age 10-14 in the labor force									
- not in school	61	47	42	40	32	23	69	65	56

Source: author's tabulations

Note: Income class refers to percentile in the household per capita income distribution.

**Table 18: Brazil - Simulated Outcomes for Children in
Female Headed Households, 1984**

(number or percent)

Outcome by Children's Age Status	Recife				São Paulo				Porto Alegre			
	All	FHH	FHH*	Poverty Effect	All	FHH	FHH*	Poverty Effect	All	FHH	FHH*	Poverty Effect
Age 7-9												
-not in school	14	23	19	0.5	8	8	7	-	10	12	11	0.6
Age 10-14												
-not in school	14	22	17	0.7	8	12	11	0.2	12	18	16	0.4
-in the labor force	7	10	7	0.8	8	12	11	0.3	9	16	14	0.2
Children Aged 10-14 in the Labor Force												
-not in school	56	69	65	0.3	36	42	40	0.2	66	67	70	-

Source: author's tabulations

Notes: FHH* is the simulated outcome for children in female-headed households.

Poverty effect is the proportion of the difference between households explained by the difference in means. For example, 0.5 implies that 50 percent of the difference in means is attributable to the lower income of FHHS.

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